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ABSTRACT

Planning for changing types of health professions and a changing clientele necessitates designing flexible facilities. Findings from a recently completed analysis of ambulatory care facilities are directed to planners in the form of 16 memos. Approaches to planning and design considerations are made that attempt to humanize these facilities. Suggestions concern services provided, rehabilitation of existing space, converting found space, options and considerations in a new building, and shared services and facilities. Other factors are identified that improve the environment for ambulatory care for those who render the service and those who benefit by it. (Author/MLF)

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MEMO

TO:

Ambulatory Health Care Planners

FROM:

Educational Facilities Laboratories

EFL is circulating this memo in order to share some findings from our recently completed analysis of ambulatory care facilities. You will find that we are advocating that the physical environment be given early and serious attention, and we hope that the information will make your task easier by alerting you to issues and suggesting options that you can take.

May, 1976

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1. Ambulatory care, a growth industry - if you're not concerned about facilities you may before long.

Emerging from the heady growth of the 1950s and 1960s, many American institutions faced with reduced resources and shrinking clientele are planning for nongrowth in the 1970s. But not in the health field, and especially not in ambulatory care. As the economists would say, it is a growth sector. Paradoxically, and unhappily for those who must make decisions and commit building dollars, it's also a sector with great unknowns. In spite of an inability to predict precisely who will deliver ambulatory care, who will receive it, what will be paid for it, and what services will be rendered, it is clear that significant capital expansion is going to take place. New buildings will be built, others rehabilitated, and still others converted from some other purpose. Some clues to the growth potential:

- The use of ambulatory care in hospital outpatient departments has risen more sharply than hospital admissions. The number of outpatient visits doubled from 125.1 million in 1964 to 250.5 million in 1974.
- It has been only a few years since Blue Cross began to offer important outpatient benefits, but in 1974 its 79 health insurance plans paid claims for nearly twice as many outpatient visits (15,800,000) as inpatient admissions (8,900,000).
- More than 200,000,000 visits were made to hospital emergency departments in 1974. Doctors estimate that up to 60 percent of these people were not true emergency cases, but were seeking care that could have been rendered in ordinary ambulatory facilities, if available.
- In 1966, the average general practitioner spent 49.2 hours a week in direct care of patients and he saw 159.4 patients for 18.52 minutes each. In 1973, he had slightly

shortened his workweek with patients to 47.6 hours, but he was cramming 189.9 patients into that time, giving them an average of 15.03 minutes each. Increased patient load, plus the growing tendency of doctors to practice in association with one another, rather than solo, demands space.

○ Improving health education of the public and increasing awareness of disease prevention will increase demand for ambulatory care facilities. Two examples: In recent years millions of women have learned the desirability of Pap smears and now regularly visit their doctors to have them made. At the time of writing, the federal government and a number of voluntary agencies are seeking to discover an estimated 23,000,000 Americans who are believed to have hypertension and either do not know it or are going untreated. Obviously these people are not seeing doctors regularly now, but when and if found they will need regular care, almost all of it ambulatory.

○ Almost all Americans now agree that some form of national health insurance is needed. In a poll taken in 1975 by Cambridge Survey Research, only 13 percent of respondents favored keeping things as they are. Another 23 percent favored a minimum NHI program which would give medical insurance to the poor and catastrophic coverage to everyone. A majority of 57 percent favored going further—35 percent would guarantee as much care as needed to all who need it and 22 percent would go all the way to total nationalization of health care.

There is no reliable way to estimate just how much space will be generated by expanded ambulatory care. Nor can one predict with any certainty what proportion of this care will be housed under new roofs and how much by remodeling existing buildings. Part of the answer will depend upon whether government financing for construction is available and upon what terms. The only certainty is that total demand for care and for space to house it will increase. Planning to meet the demand seems prudent.

2. The various settings of ambulatory care- components in a "system" of health delivery.

Ambulant patients can be given care in many types of settings. Thus when considering the whole spectrum of ambulatory facilities we must include solo practitioners' offices, complex OPDs at medical centers, neighborhood health centers, and medical arts buildings. Some of these places are not given serious consideration as housing ambulatory care, and the lack of attention shows in the mismatches between place and people and process, and the lack of explicit relationship among the various forms of primary, secondary, and tertiary care.

The variety of ambulatory care settings include:

MEDICAL ARTS/MEDICAL GROUP BUILDINGS Solo practice once dominated American medicine but it is steadily declining in popularity as more and more doctors tend to associate in one form or another.

By 1972, a majority of doctors in private practice at least shared office buildings. The largest number of these offices (45 percent) were located in "medical arts" buildings (structures which housed the premises of other, unassociated doctors), according to a 1970 study by *Medical Economics*. Buildings that housed only one physician and his associates, if any (which includes group practices), were second in popularity (28 percent), followed by multipurpose buildings, such as office blocks or apartment houses (19 percent), with homes (5 percent) and hospitals (3 percent) at the bottom.

Medical office buildings are designed for (and often by) doctors. But even so, they're not very happy with the results. According to the 1970 *Medical Economics* survey, only 38 percent of the doctors rate their offices as out-

standing. Within the previous five years, 28 percent had made major structural changes and the pace was speeding up; in 1970 alone, 10 percent had made such changes. (At that rate of increase, all offices would be remade in just over seven years, a good reason to build in flexibility.)

The things the doctors liked most about their offices were convenience and location. Among things they didn't like: lack of room for expansion, inadequate parking, inefficient layout and inadequate patient privacy. A third of the doctors complained of inadequate storage space.

HOSPITAL OUTPATIENT DEPARTMENTS About 2,000 hospitals have outpatient departments offering ambulatory services ranging from the equivalent of three full-time primary care doctors up to the equivalent of 30 or more with diverse specialties. As part of the hospital, the department has the advantage of being backed up by the whole range of the institution's resources.

But there are well-recognized facility problems. The hospital's location may be inconvenient for many of the people the outpatient department should be serving. The department is often planned and designed as a kind of afterthought, an "add-on" to the institution proper, with little consideration for its unique functions. Often there is little consultation in planning either with the doctors or patients using it.

The "satellite" clinic, away from the hospital and out where the people are, is becoming more common. It seems likely that these trends will go even further in at least two important respects. (1) More hospitals will open facilities for ambulatory care and they will be planned to serve patients of all social strata and to be attractive to all. (2) Hospitals will move into closer coordination with community physicians, offering them more backup services and seeking to integrate them into the system.

NEIGHBORHOOD HEALTH CENTERS Doing much more than dispensing medical services and drugs, the Neighborhood Health Center attempts to deal with the whole

spectrum of factors that affect the health of its patients. In addition to providing comprehensive health care, they produce other beneficial effects such as bringing employment into depressed areas, organizing the community for environmental improvements and generally stimulating a high degree of community involvement in health affairs. They may be sponsored by a variety of sources: hospitals, labor unions, governmental agencies, and independent consumer groups.

OUTREACH FACILITIES "If people cannot come to the medical center, then let us bring the medical center to them." It is an attractive idea and it is being attempted in two principal ways. One is the mobile unit, essentially a traveling doctor's office that rides circuit in areas without doctors, like the traveling library van.

A second pattern is the fixed station manned by such new health practitioners as nurse practitioners or physician's assistants who handle the day-to-day care, though circuit-riding physicians may make periodic visits. The station can be in instant communication with the medical center, so that consultation is available at all times.

SPECIALIZED CARE Family planning and mental health centers are familiar; abortion centers and free-standing surgical units where operations are done that do not require overnight bed confinement are newer and somewhat controversial. Renal dialysis units are proliferating and here and there day care centers are active for cancer and psoriasis patients.

OTHER SETTINGS Care in the home is practically nonexistent. But as our population ages, care delivered by physicians in retirement communities, nursing homes, and senior citizens centers will increase. Also, care provided through joint centers with other public institutions, such as community colleges, universities, and community/school centers is on the increase.

The variety of places for ambulatory care will expand. But creating a coordinated system from these components

is another matter. Ambulatory care is the very heart of all health care. It is the kind of care that most people need most of the time for most of their ailments. It is the form of care most suited to the maintenance of health, the prevention of disease and to early detection when disease does occur. It is the main point of entry to more complex forms of care rendered in the community hospital and the medical center. Yet for all its centrality, ambulatory care is not well coordinated in the health care system about which we are so fond of talking.

Creating a system of health care facilities with coordinated, supportive, nonduplicative components, including ambulatory care facilities in all their variety, is the challenging planning problem. It requires stepping away from individual building projects and looking at the whole—and having the agencies, resources, and incentives to do so. It is an issue not adequately covered by this memo, nor the study upon which it is based, except that it is clearly the leading problem for research and resolution.

MEMO

3. The relative cost of the place is small, but important - facilities effect efficiency of care and how those served feel about their care.

The people responsible for initiating or extending ambulatory care are usually caught up in the issues of funding, management, staffing, and the politics of health care. They have little time to consider the place where the care will be given. Thus, the environment is given short shrift—probably because it represents such a small part of the cost. In

the total cost of ambulatory care, the cost of the place is minor—probably only about 5 percent of the cost of running it for a life of 40 years.

But even though the cost is small, the impact can be great. Where the facility is located, how well it is planned, and how carefully design details are thought through can determine how efficiently the staff is employed, how well those to be served are indeed served, and most important, how well those that are served feel about the service they are receiving. Its location and relation to the larger community and other health care institutions will help determine whether those that need services are connected with them, whether the place can be staffed and whether the costs of care are reasonable. The place can increase frustrations and anxieties of both the served and the servers, or it can enhance care. It can even be a happy place. Unfortunately it's difficult to assign cost-benefits to improved facilities. But, if adding some environmental amenities (like carpeting, decentralized waiting, noninstitutional furniture) or building in some flexibility (more on both these subjects later) adds 10 percent to the initial capital cost, that's only one-half of 1 percent per year over the life of the building. And this modest investment may be recaptured many times in efficiency and quality of care.

MEMO

4. Planning for what-
the expanding services provided
through ambulatory care.

To that old saw that the only things of which we can be sure are death and taxes can be added "change." And ambulatory care is no exception. For planners, it's impor-

tant to review not only what services are to be provided immediately, but also those that may be added as the services expand and grow, as they are bound to do. The exercise is important for two reasons:

1. Early anticipation of additional or changed services may prevent facilities that lock out needed services.
2. It will establish an attitude—and in turn approaches to "staying loose" as expressed by building flexibility and adaptability.

So in planning, consider these changing elements.

Social medicine It is not here to argue the extent to which social medicine—drug counseling, family services, family planning, abortion referral, psychiatric counseling—is to be delivered through the various forms of ambulatory care. It is enough to note that in many settings many of these will be important and reflect the ever-expanding range of what are viewed as valid services in an ambulatory care facility. Unfortunately many ambulatory care centers have been built based on a traditional program of scientific medicine and planned to serve a defined population. When social services were added in response to community pressure, something had to give: The population served had to be reduced, or conventional services reduced.

Patient education If ambulatory care is to encourage preventive medicine and assist patients in coping with their own particular condition, then it's likely to be a place for education and "educators."

For example, having revealed to a patient that he has diabetes, few doctors can take the time to explain in detail just what his ailment is, why it is important to change his life style in certain ways, and the reasons for his strange new diet. A physician's assistant or a nurse with a little special training can take the time to explain things, to answer questions, to make sure the patient understands. Patients often feel more comfortable with such a person;

they may be afraid to ask the doctor a "stupid" question.

Even if such patient education is on a one-to-one basis, the nurse and patient must have a place to do it. As the number of patients increases, it will become desirable to have meetings to educate numbers of patients about ailments that especially require compliance, to teach pregnant women about prenatal care, young mothers about infant care, and the like. Patients also have a capacity to help one another as in an Alcoholics Anonymous chapter. Mastectomy patients can lend each other support in a way that no physician could do. A medical group may not be ready to undertake all of these activities at once, but built-in limitations should not foreclose its options.

Professional education Because ambulatory care facilities offer the broadest view of health services, stressing preventive over curative care, they are becoming a prime training ground for medical students, physicians, physician extenders, and health care specialists. Training is translated into immediate, practicable goals, especially for physician extenders, whose work concentrates more on positive measures of health care—exercise, diet, and overall regimen.

Apart from its technical and psychological aspects, ambulatory care training can provide ancillary benefits for physicians and medical students—notably in broadening their social outlook and encouraging them to venture into unfamiliar environments with patients from low social and economic status. Ambulatory care facilities can provide fruitful internships and residencies, especially as part of a vital care-oriented center. It can broaden a young physician's outlook, teaching him the virtues of medical team practice and representative practice, and can prepare him for changing patterns of practice. It's particularly appropriate for training the health care team—another objective so often lost in rhetoric.

Threshold for health care If an ambulatory care center

is to function as the entry point and provide continuing medical care, some other services must be considered in planning:

- repository for patients' medical records;
- reference center for the entire spectrum of health and social services;
- information center for community-based services;
- diagnostic procedures and automated health testing, often in conjunction with inpatient procedures;
- preventive care—general checkups, vaccinations dental checks. (Visits to physicians' offices for these purposes continue to decline.)

Laboratory for experimentation in health care delivery The most advanced centers continue to experiment and innovate in the delivery of ambulatory care services. Thus these facilities may be viewed as more than dispensaries of health care services: They are also laboratories.

MEMO

5. Planning for whom-the changing clientele, the changing types of health professionals and staffing.

Two types of "whom" must be considered—those to be served and those serving.

Planning for services and facilities based on an existing population can only be thought of as a starting point, for there are at least three factors to be considered in projecting the kinds of persons to be served during the life of a building.

BROADENED SERVICES AND CHANGED CLIENTELE Obviously if additional services are added, some changes in

those served will result. For instance, a family counseling program will bring children in larger numbers than originally expected, as would a preventive health program for the schools. It would be well in the early stages to postulate the kinds of services that might be added, the shifts in uses that might result, and the additional kinds of facilities, if any, that might be provided.

OVER-ALL POPULATION CHANGES The dynamics of demography will change the user patterns for ambulatory care. For instance, medicine is enabling a good many more of us to reach old age by preventing, curing or at least enabling us to live with many of the diseases and injuries that carried our ancestors off early in life. The result, of course, is a steadily growing number of older people in our population. In 1960, 16,560,000 Americans (8.7 percent) were over 65; by 1975, both the number and the percentage had increased to 23 million and 10 percent respectively.

Old people, as none of them needs to be told, are subject to many chronic diseases—arthritis, hypertension, heart disease, diabetes, to name a few of the most common, and most patients have more than one. Many of these patients require constant monitoring by physicians. Thus we would expect older people to make more ambulatory visits than the young, and indeed they do.

In 1972, Americans between the ages of 25 and 44 visited a physician an average of five times a year; those between 65 and 74 averaged 6.6 visits and those over 75 averaged 7.4. Since we can expect an ever-larger number of Americans to grow old, we can expect a corresponding increase in their demands for ambulatory care. Obviously, facilities must be flexible enough to meet the demands.

Declining birthrates, if continued, may decrease the number of the very young served, and some facilities serving their needs will be converted to other uses. Higher divorce rates, more single parents, older parents may all have impact worth watching.

POPULATION MOBILITY That populations move, especially in our metropolitan areas, causing dramatic ethnic,

racial, and economic changes in a community comes as no surprise to health care planners. Neighborhood renewal, reversing some of the flight from inner-city areas, may well change some of the conventional wisdom about users of ambulatory care in the city. Close cooperation with urban planning agencies may well help anticipate changes and allow adjustment in program and facilities.

Also, the kinds of persons delivering services are changing. One group practice built a center designed for 12 physicians, two nurse practitioners and one physician's assistant. In a very short time, the building was accommodating, in additon to those people, three more nurse practitioners, four more PAs, a part-time social worker, a part-time dietician, a resident, an intern, a medical student and a student PA. Comfort, convenience and efficiency in that building were gone almost before the paint began to soil.

There's another, more practical, reason to anticipate changes in staffing patterns. Just as humane quality is essential to the patient's psychological well-being, so are other qualities of the ambulatory care facility essential to recruitment and morale of the health care team. As one of the few major industries bucking the sluggish current economic tide, the health industry remains a growth industry, with a projected 25 percent increase in employment (from 5.2 million to 6.5 million) over the next five years. Ambulatory care service should account for a higher rate of employment growth than the rest of the health industry. But ambulatory care confronts a severe handicap competing against hospitals in the personnel market. Hospitals offer higher pay, higher status, and greater security. Improved facilities obviously cannot correct this competitive imbalance alone. But they form an indispensable part of a coordinated attack on the personnel problems.

6. Planning for change - flexibility, adaptability, convertibility.

For our purposes, Louis Sullivan's famous architectural dictum that "form follows function" might be rephrased to say that form *permits* function. If one asks a department head what facilities he wants in a new building, his request will probably be for something with which he is already familiar, except that he wants more of it. But to grant such a request without question usually means to freeze into steel and concrete an existing pattern and a given volume of activity.

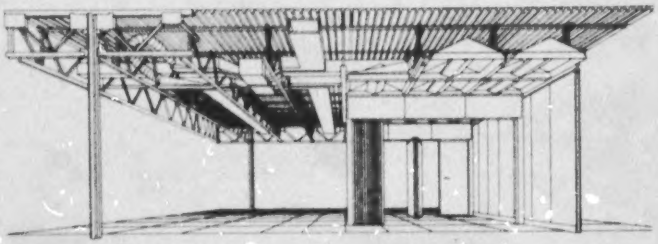
Planners who follow what may be called a "diagnostic" rather than a "form" approach to planning and design should be able to allow options to be exercised that will permit a variety of approaches to problems. Planning of this kind not only gives freedom, but usually saves money in the long run as well.

We've dealt with the need for "staying loose" in terms of changing users and services. There is also the probability of changes in how the health care personnel are arranged within the building. If, for example, a physician team of two employs four or five new health practitioners, the firm's practice both expands and changes radically. These changes require changes in the physicians' offices layout. If the physicians still function as the nucleus of the health care team, then the new health practitioners' offices might be arranged like satellites around the physicians' offices, with the physicians spinning off patients to their assistants' offices. On the other hand, if the health practitioners initiate a diagnostic process ending with a physician's consultation, a linear alignment might be better.

The health team concept versus the traditional nuclear physician has broad implications for facility planning and design. Under the health team concept, nurse practitioners, nutritionists, community health educators, social workers, and psychologists lift some basic burdens from

the physician enabling him to serve a much larger clientele. And the arrangement of their work places will change as the team and its methods evolve.

So one constant is change and what is planned must be prepared to change—to adapt. Long-range adaptability may suggest building systems and components that allow the rearrangement of interior space—the relocation of partitions and furniture, lighting and mechanical systems—and involves planning that fixes as few spatial elements as possible. Long-term adaptability may also



Building systems based on coordinated pre-engineered components provide an approach to new construction that permits faster construction and provides space amenable to change during the life of the building.

suggest moving from place to place—leased space which is exchanged for other leased space when the original is no longer appropriate. Providing for such adaptability may add slightly to the first costs of the place, a cost which is small anyway. The costs of not accommodating change are rarely considered.

There are also considerations for short-term change—the ability to make environmental adjustments quickly. Spaces located and arranged so they can be converted to another use—from treatment room to counseling room—is short-term adaptability. Committing as little as possible to special use and leaving as much as possible for adaptable or "swing" use is another. Furnishings and equipment—free-standing dividers, relocatable storage elements, rearrangeable work stations—may provide a high degree of short-term adaptability for those areas not requiring spe-

cial equipment, location, or total privacy. These may be bought "off the shelf" and may be modular and interconnected providing a system of furniture and space division.

Because a "loose fit" in the environment is adaptable, economical and provides greatest longevity, you should maximize open space. Generalized space can be made special by systematized furnishings and equipment. Openness allows flexibility. If the building is acoustically damped, "skiddable" partitions of less than ceiling height may be satisfactory for visual privacy and to define the various territories in some areas. Where security or privacy is required, floor-to-ceiling relocatable partitions are more readily rearranged than permanent walls.

When it's clear that conflict between place and people/process does exist, and reaccommodation is required, professional planning help should be retained. And it's logical that this help be drawn from the architects and planners who created the place initially.

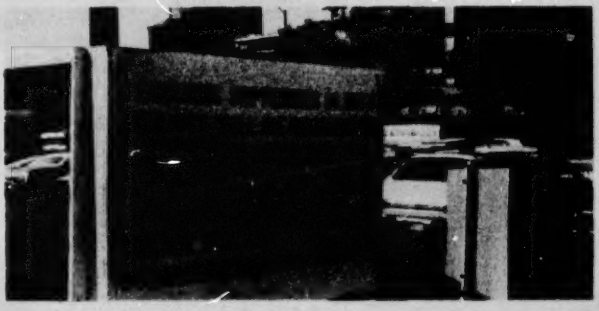
Free-standing space dividers, storage units, work stations and furniture may be used for ambulatory care centers created in loft spaces in new or remodeled buildings. This type of furniture lends itself to frequent rearrangement of space and function.

MEMO

7. Location- connecting those to be served with those that serve.

To the frustration of planners, the location and accessibility of ambulatory care facilities is another issue for which there are no easy answers. Here are some considerations:

- Expansion of ambulatory care within a major medical center or near a community hospital, usually an inner-city location, will have great advantages when considering access to the great array of specialists and special facilities, ease of moving from outpatient to inpatient status, and convenience of staff. But unfortunately, this is often not the most convenient location for those to be served.
- A problem that the patient perceives to be urgent may bring him in, but at a price. According to the National Health Survey, patients spent an average travel time of 17 minutes to get to a private doctor's office, but 24 minutes to a hospital clinic. One out of five patients had to travel 30 minutes or more to a private office and one out of 10 required an hour or more to get to a hospital clinic. And money is important: people with incomes of $15,000 or more averaged 16 minutes to get to their doctors; those with $3,000 or less, 22 minutes. Part of that undoubtedly is the difference between owning a car and riding on a bus.



Parking, always a problem, is all too often given inadequate attention in the early stages of planning.

- Other factors beside the proximity of a large patient population enter into the pinpointing of a location. It should be in a place where people go for other purposes. Seeing the doctor might be easier if on the same trip one could do a little shopping, visit the library or take in a movie. A shopping center, which offers other attractions and plenty of parking space, could be a good location.
- Outreach, free-standing or satellite centers, located for the convenience of those to be served may satisfy the social planners, but may severely inconvenience the staff, duplicate backup services, and isolate that rich array of special people and facilities in the medical center. But, if located in consideration of public transportation, major traffic arteries and parking, they just may be the right place for both those who serve and those to be served. Determination of location can be aided by tapping the data and expertise of city and regional planning agencies. Such agencies care very much about access to health services—and other social services—and should be most willing advisors.

MEMO

8. Unitary delivery of social services-ambulatory care as a component in human services centers.

Another locational option worthy of special mention is the human services center. Such centers are emerging in many communities, old as well as newly planned, and draw together various mixes of health, education, recreation, services for the very young and old, and government agencies. The reasons include:

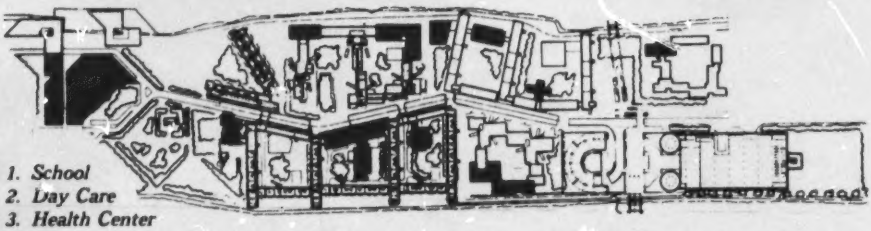
- Economies derived from sharing the cost of building and operating facilities, and sharing joint-use space.

20 *Unitary delivery of social services*

- One-stop shopping for social services to afford a wider range and easier access by the community served.
- Potential for interconnecting social programs and staff.

The human services center may be created in converted space—an underused school, for instance—or built anew. It may be financed and operated by a public facilities authority or other nonprofit group, or built and managed by one of the constituent agencies with others leasing space and sharing operating costs.

Urban development projects are frequently planned with health, education, day care and other public and social services as integral components. In this instance—Roosevelt Isla. d New Town—these facilities are dispersed; in other developments, they are gathered together into "human service centers."



1. School
2. Day Care
3. Health Center

9. Environmental scale - bigness, smallness and sense of order.

The size of an ambulatory care facility is traditionally dictated by factors often unrelated to the users. The facility's size is affected by the size of the hospital and backup services if it is institution-based; size of group practice; shortage of adequate medical office space; size of community and catchment area; availability of site; efficiencies of staffing and support services and the like.

But, the resulting size may be in conflict with the best practice of scaling facilities to user needs. Large, complex, overpowering centers with endless corridors and complicated access and circulation do not tend to lessen anxiety and ease the user's quest for health care.

The apparent conflict can be resolved by sensitive planning that is responsive to the users. Clearly articulated entrances directly related to parking and public transportation, well-marked horizontal and vertical circulation, clear signage, and receptionists at key points will all help (more on this in "Environmental Clues").

Another way of reducing institutional scale is through the use of centers-within-centers—smaller-scaled clusters of facilities each with reception, waiting, examination, treatment, consultation, and service areas. These clusters, often planned around a health care team, will not only reduce environmental scale, but reinforce the concepts of team and personalized services.

If space is available, the clusters can be expressed architecturally as a series of pavilions, possibly of several floors each. In fact, such a pavilion arrangement introduces another degree of flexibility. One or more levels of a pavilion can be remodeled or rearranged as changes in services and users dictate without disrupting the work of the total center.

MEMO

10. Rehabilitation - redeploying existing health care facilities for improved ambulatory care.

One choice for housing ambulatory care, whether new or expanded services, is the rehabilitation of existing space in health care institutions. At first this will be viewed as an unlikely choice—where could there possibly be surplus space in existing hospitals and health centers—but several circumstances may change the conditions:

- Surplus bed space, especially in obstetrics, may become available if bed occupancy drops. It's expensive space to maintain for its original purpose, and if properly located and with clever planning, might be rehabilitated. (Cook County Hospital has converted obstetrical beds to related outpatient use.)
- If inpatient services or administration offices are put in a new building, the existing space can be used for ambulatory care.
- Underused space for storage, laundry, building maintenance, basements, etc., can be converted (Genesee County Hospital successfully converted underused basement areas).

Such rehabilitation efforts may be considered interim solutions awaiting major building programs, or they may be more permanent. In either case, some conditions should be observed:

- A space use study will reveal opportunities for rehabilitation.
- A minimum amount of space is needed to operate the facilities efficiently, no less than 4,000 sq ft.
- Proper location and access for patients, staff, and services must be examined to help establish feasibility.
- Professional consultation on the costs of the rehabilitation will determine the economic feasibility. If costs run less than one-half of new construction, then consider the

idea further, is a good rule of thumb. It's particularly in mechanical systems and vertical transportation that costs will get out of hand. Include cost of demolition, if any, in the cost formula.

MEMO

11. Found space - converting space built for other purposes to ambulatory care.

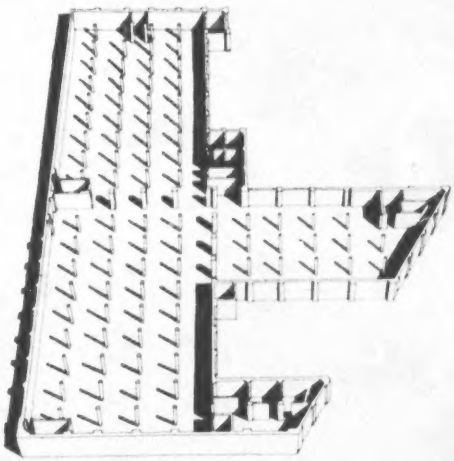
In the good old days of reasonable building costs and financing for building, the conventional wisdom when ambulatory care facilities were needed called for construction of a building. It was located either as an extension of an existing medical center, near a hospital, or on an accessible tract of land. And this is still a reasonable option. It should be programmed as realistically as possible—more on this later. Competent professional planning and design services should be retained, a close working relationship should be established between the parties planning and those to be housed, and thorough contract documents should be drawn for bids to be taken and the building constructed.

But these days there are other options. One just discussed is to remodel existing space in medical centers and hospital complexes including the renovation of former inpatient facilities when underused beds are removed.

But there are even more unconventional approaches around the general theme of "found space" or "adaptive use." Except in housing, this country is temporarily overbuilt. Consider there are 11 million sq ft of vacant office space in Manhattan, with most other large cities carrying proportional inventories. Further consider that

the economic times have created vacant shopping center space (at least 100 million sq ft has been identified)—space that has parking, simple structure, and access by public transportation and major roads. Declining enrollments have left vacant schools on the beach in many communities. Further, in many cities there is a surplus of industrial and warehouse loft space which again has major advantages for reuse. Such found space can—and in fact has been—be remodeled as ambulatory care facilities.

Existing loft buildings are often suitably located to house ambulatory care for underserved communities, and can provide large expanses of simple, rearrangeable space.

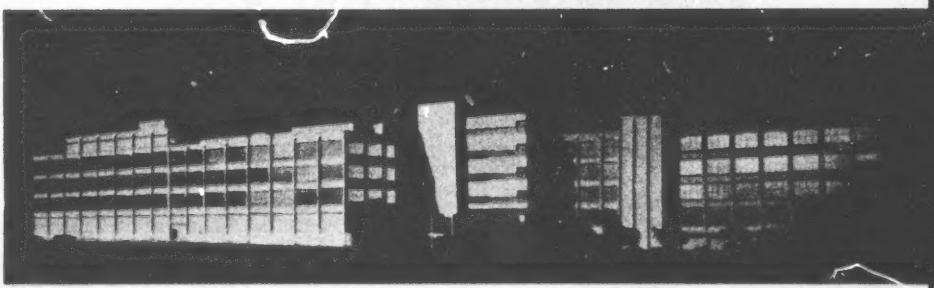


To cite one example. In Brooklyn, N.Y., the Lutheran Medical Center will move into a factory building which it is now remodeling. Its family practice clinic, some distance from the main hospital, is housed in knocked-together ground-floor apartments in a perfectly ordinary building of the kind in which its patients, who are mostly Puerto Ricans, live. The furnishings are comfortable and satisfactory, but a conscious effort was made to make them not so fancy that patients would feel ill at ease.

Several points to consider:

- Such found space may be leased or purchased depending on the desired times of occupancy.
- Location—access to users, available parking and public transportation, and space for expansion are key criteria when searching for found space.
- The uncertainties of costs for conversion of found space demand careful cost analysis with reliance on professional advice. In addition to mechanical systems and vertical transport, adherence to building codes and compliance with funding agencies can spell the difference between economic feasibility and a bad investment.
- Governmental planning and community renewal agencies will be helpful in finding and selecting appropriate buildings for conversion.

The Lutheran Medical Center, Brooklyn, New York, rebuilt a large abandoned factory building, and in the process launched a major community renewal effort.



Courtesy of Rogers, Butler & Burgun, Architects

MEMO

12. Building new - further options and considerations.

As previously suggested, a new building programmed, designed, built and furnished in the conventional manner—specifically to house a particular program of ambulatory care—is one approach.

But even within the rubric of new building, several other unconventional approaches may be considered.

Building systems Previously mentioned as an approach to flexibility, the use of preengineered building components that are structurally compatible, and together form a building system, can have other advantages. Buildings can go up faster, even during severe winter weather, and costs can be better controlled.

Prefabricated, industrial-type buildings Early prefabricated buildings usually looked like barracks or warehouses, perhaps economical, but seldom pleasing. Today a considerable variety of prefab shells are available that can be esthetically pleasing, long-lived, readily expandable and arranged in many layouts and configurations. They often provide considerable advantages both in cost and speed of construction. Such prefab buildings are purchased as a package, requiring site work, utility connections, mechanical systems, furnishings and equipment, and space divi-

New building technology—like this geodesic dome structure for a rural health care center—can provide quick, sometimes low-cost, shelter.

sions. Two advantages are quick response and potential ease of reuse for other purposes.

Domes and fabric structures Especially suited for rural health programs to meet the needs of migrant populations. These quickly erected prefabricated structures use new building technologies that offer many advantages. One unusual possibility is that the structure can be as nomadic as a tent.

MEMO

13. These are places for people–environmental clues and design decisions that humanize the place.

Institutional buildings are notable for their inhumaneness–and ambulatory care facilities are no exception. In attempting to humanize the place, it's difficult to give specific design direction or cost-benefit conclusions. However, here are some approaches to planning and design considerations which should improve the environment for ambulatory care by honoring–at least respecting–those that render the service and those who benefit by it.

Clear signage and entrances are important early environmental clues for the patient using a center.

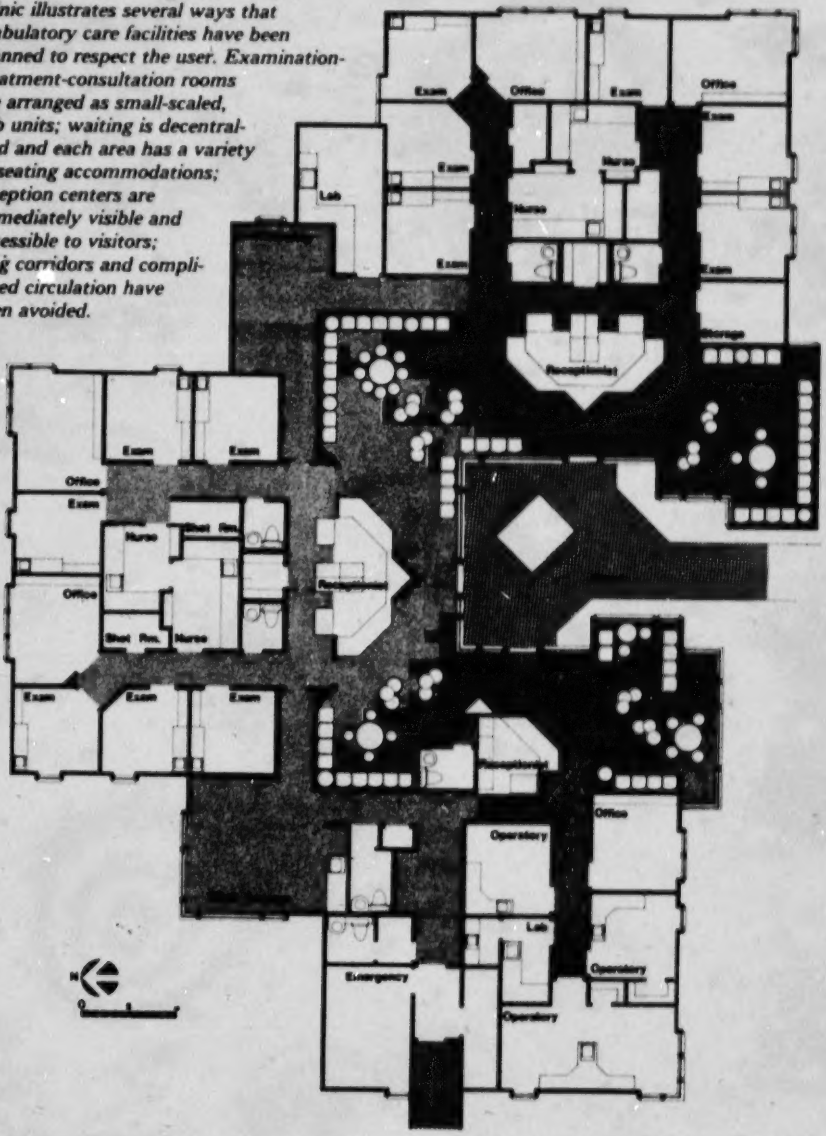
Access and circulation Patients should be able to move easily from parking lot or public transit to entrance, from there to a point of recognition and reception, and on to waiting without complication and barriers. Signage can help, color and texture can help, clearly visible entrances and well-positioned receptionists can also help.

Waiting Humanizing "the wait" is about the toughest design and managerial problem. (It's estimated that more time is lost each year by Americans waiting to see doctors than is lost in labor disputes. Average patient waiting times range from 35 minutes at physicians' offices and hospital emergency departments to 52 minutes in hospital clinics. Roughly one in three patients wait an hour or longer to see the doctor.) In the best of circumstances there will be waiting, hopefully not long, but the place can be small scaled, provided with amenities such as plants, light, art, views to the outside, toys for the young, comfortable seating, and a person to receive patients and pass them on to those who will provide care.

Scale By its very nature, ambulatory care tends to be housed in a maze of little box-like rooms, connected by corridors, a complex environment to be encountered and overcome by the patient. By rethinking the issue of scale,

Varied lighting, comfortable seating informally arranged, plants, and noninstitutional wall surfaces and finishes provide positive "environmental clues."

This plan of the Arlington Children's Clinic illustrates several ways that ambulatory care facilities have been planned to respect the user. Examination-treatment-consultation rooms are arranged as small-scaled, sub units; waiting is decentralized and each area has a variety of seating accommodations; reception centers are immediately visible and accessible to visitors; long corridors and complicated circulation have been avoided.



for instance, by decentralized waiting areas surrounded by smaller numbers of examination/consultation rooms, some of the inherent complexities can be overcome. A large building may be needed to provide for thousands of visits per year and efficient employment of staff, but its scale may be reduced in various ways to the advantage of the patient.

Environmental clues There are many clues, often small in detail, that suggest to the patient and the staff, the level of concern the planners and administrators have for their well-being. Some we have covered, others include: has carpeting been used wherever possible to quiet noise and improve appearance, are entrances clearly marked, is signage clear and up-to-date, has a noninstitutional color scheme been used, can a patient wait in semiprivacy, does someone know when a patient arrives at the waiting area, is there variety in lighting or is it all bright and from the ceiling, is there a drinking fountain and maybe even a coffee pot?

Given time for creative-planning and some freedom to propose fresh solutions, most planners can overcome the rabbit warren's syndrome with its long, dull, institutional corridors leading to large, mean waiting areas equipped with slippery furniture. These and many other environmental clues will trigger responses, more positive than negative if considered in planning.

MEMO

14. Not all will be totally ambulant- removing barriers to the handicapped.

There is a major civil rights movement in the United States on behalf of the handicapped directed to improve

access to education, recreation, the arts, housing, and health care. Court decisions, legislative programs and regulations established by funding agencies have placed great pressure on public service institutions to eliminate architectural barriers and establish programs and services that place the handicapped in the "mainstream."

It is not the purpose of this memo to set forth all the architectural considerations—ramps or grade level entrances, wide, automated entry doors, elevator controls at wheelchair level, special considerations in fixtures and their location in rest rooms, wide paths clear of obstruction for circulation within waiting areas and offices. Extensive literature, including design guides, and agencies to assist in compliance do exist and will be useful when designing ambulatory care facilities.

The point is a simple one. The users of ambulatory care facilities will not all be free of handicaps—many will be infirm and unstable, others will require canes, crutches, or be confined to wheelchairs, others will be very pregnant or very young. Woe to the ambulatory care planner who does not eliminate barriers to the handicapped.

MEMO

15. Putting it all together—approaches to the programming/planning/building process.

Returning to an earlier theme—that the physical environment should be considered at the outset of over-all planning—also suggests that the early establishment of a harmonious working relationship between architects and professional consultants and the professional staff is vitally needed. This early and close working relationship is

needed regardless of the size of the project and whether the building is new, rehabilitated or converted.

Their work together starts with the development of a building program—a statement of purpose and intent leading finally to a detailed listing of spaces, space relationships, equipment and the desired amenities. It is here that the process is likely to fall apart for two reasons. First, detailed programming appears to be in conflict with the goal of environmental adaptability. This need not be the case, but the relationship of the two desires—that is, to remain loose and changeable, while providing that which is needed when the building, whether new or remodeled, first opens—must be worked out. And second, the programming process may fall apart due to the lack of hard, well-documented data on how ambulatory care facilities really function—data on length of visit by specialty, patient loads by specialty, ebb and flow of patients by type during the course of the day and evening, and the effect on all of these by changes in demography and services provided.

A public interest in consumerism (termed participatory planning when building is involved) and governmental involvement place additional burdens on the planning process. These burdens involve a whole spectrum of interests that range from regional planning councils administering certificate-of-need legislation to lay representatives from the community.

We seem to be moving from health care dominated by the providers of health services, to a more democratic partnership of government, health service practitioners, and consumers. As a consequence of this trend, planners are already confronting two durable, related problems:

1. How to balance governmental and private interests.
2. How to reconcile consumers' and providers' interests.

Over the past decade health service consumers have been steadily, if slowly, gaining power in planning health care facilities. In precedent-setting federal legislation marking the beginnings of consumer influence, the Hill-Burton Act was amended in 1964 to require that at least

one-half of its hospital advisory council be consumer representatives. In 1967, federal legislation establishing a network of agencies for comprehensive health planning had similar requirements for consumer representation.

Paradoxically, federal health care programs for the poor have done most to assert consumers' rights in shaping ambulatory care facilities. Because of the nature of their problems, health centers serving the poor have developed the fullest awareness of health care as a social institution. Consumers gained a loud voice in the neighborhood health centers established by the now defunct Office of Economic Opportunity (OEO). These OEO centers invited more active consumer participation in planning and evaluating services. And, consumer-oriented health centers have inspired concerted action on other community problems. Though needs vary greatly from one community to another, such health centers nonetheless serve as models for more prosperous consumer participation in planning ambulatory care facilities.

Planning agencies are asserting new power as the nation's traditional health care system is shaped into a more rational structure. Through "certificate-of-need" legislation, regional planning councils (Health Service Agencies) will have greater control over building by apportioning financial aid to communities.

These dilemmas and external forces affecting facilities planning are reported here simply to strengthen the case that "putting it all together" is an increasingly complex process. Given good working relationships, time to pose the proper questions and sort out the answers, totally satisfactory facilities will result.

MEMO

16. Problems to avoid- some observations from the field.

As might be expected, ambulatory care centers were visited, administrators and planners were interviewed, and literature searched during the project. The following gleaning of comments and observations provides a conclusion to this memo:

On planning for the consumer Badly planned facilities indicate the ambulatory care administrators' disdain for consumers' needs. Patients are confused by the routing from one place to another. Organization into specialties and departments may be confusing. Quirks and turns of buildings with numerous add-ons may confuse the staff; they are certain to confuse the patient.

On public spaces New buildings have their own unique flaws. Overstated entrances and lobbies are commonplace. Space is used prodigally to impress the visitor. Meanwhile, the patient is crammed into tight quarters.

On waiting time Planning for user needs often requires little more than common-sense exploitation of available resources. Staffing changes can reduce patients' waiting time. Most ambulatory care patients require interview and/or instruction that could be imparted during the waiting period.

On planning for management Management functions must be better provided for. Ambulatory care centers house and integrate such vital managerial functions as patients' medical records, appointment scheduling, staff scheduling, and business transactions with patients whose point of entry into the health care system is the ambulatory care facility.

On the networking of services The ambulatory care personnel also serve as traffic directors, sending patients

to specialists, diagnostic centers, hospitals, and other health care facilities, or perhaps to allied social and counseling agencies.

On depersonalization With machines and laboratory tests steadily eroding personal contact between doctors and patients, the physician becomes less responsive to the person than to the body that is measured and medicated. Humane, ambulatory care facilities can encourage the human contacts that formerly existed between doctor and patient.

On the obstacle course Instead of moving through a smoothly functioning traffic flow with minimal irritation and inconvenience, the patient staggers through the health care system like an exhausted runner on an obstacle course designed to test his physical and emotional stamina.

On storage Storage space has not taken into account the soaring popularity of disposables. One or two cabinet shelves may hold all of the instruments the doctor commonly needs if they are to be sterilized and used repeatedly; if they are replaced by disposables, however, those instruments may be bought in case lots—and there has to be a place to put the cases.

On staffing and facilities The physician extender-nurse practitioner issue is going to be explosive and will greatly alter the arrangement of facilities.

EFL PUBLICATIONS

The following reports are available from EFL,
850 Third Avenue, New York, N.Y. 10022

ARTS AND THE HANDICAPPED: AN ISSUE OF ACCESS Gives over 150 examples of how arts programs and facilities have been made accessible to the handicapped. A great variety of programs are included, from tactile museums to halls for performing arts, and for all types of handicaps. Special emphasis on the law, the arts and the handicapped. (1975) $4.00

THE ARTS IN FOUND PLACES An extensive review of where and how the arts are finding homes in recycled buildings, and in the process often upgrade urban centers and neighborhoods. Over 200 examples, with special emphasis on "do's and don'ts." (1976) $7.00

CAMPUS IN TRANSITION Interprets demographic factors influencing college enrollments, discusses current academic trends, and describes how dozens of colleges are producing new income and/or providing new programs without building new facilities. (1975) $4.00

CAREER EDUCATION FACILITIES A programming guide for shared facilities that make one set of spaces or equipment serve several purposes. (1973) $2.00

COMMUNITY/SCHOOL: SHARING THE SPACE AND THE ACTION How schools share facilities with other public agencies to provide improved social services. The book discusses financing, planning, building, staffing, and operating community/schools. (1973) $4.00

THE ECONOMY OF ENERGY CONSERVATION IN EDUCATIONAL FACILITIES Recommendations for reducing energy consumption in existing buildings, remodeled projects, and future buildings. Explains the importance of including long-term operating costs and evaluating capital costs of electrical and mechanical systems. (1973) $2.00

EDUCATIONAL CHANGE AND ARCHITECTURAL CONSEQUENCES A report on school design that reviews the wide choice of options available for planning new facilities or updating old ones. (1968) $2.00

ENVIRONMENTAL EDUCATION/FACILITY RESOURCES Illustrates where and how students learn about the environment by using existing facilities in schools, communities and natural sites. (1971) $2.00

FEWER PUPILS/SURPLUS SPACE Looks at the phenomenon of shrinking enrollments, its extent, its possible duration, and some of the strategies being developed to cope with unused school space. (1974) $4.00

FIVE OPEN PLAN HIGH SCHOOLS Text, plans, and pictures explain how five secondary schools operate open curriculums in open spaces. (1973) $3.00

FOUR FABRIC STRUCTURES Tent-like or air-supported fabric roofs provide large, column-free spaces for physical recreation and student activities at less cost than conventional buildings. (1975) $3.00

GENERATING REVENUE FROM COLLEGE FACILITIES Strategies used by institutions of higher education to produce income from their land and buildings. (1974) Single copies free, multiple copies 50 cents each.

THE GREENING OF THE HIGH SCHOOL Reports on a conference on how to make secondary school healthy. Includes the life-styles of adolescents and ways to accommodate them, open curriculums, and alternative education programs. (1973) $2.00

HANDS-ON MUSEUMS: PARTNERS IN LEARNING Provides case studies of fourteen museums that cater especially to youth by providing programs and facilities which involve visitors as participants in learning. Also reviews the impact of this philosophy on planning, staffing, and constituencies. (1975) $3.00

HIGH SCHOOL: THE PROCESS AND THE PLACE A "how to feel about it" as well as a "how to do it" book about planning, design, environmental management, and the behavioral and social influences of school space. (1972) $3.00

NEW PLACES FOR THE ARTS Provides descriptions of several dozen recent museums, performing arts facilities for theater or music, and multi-use centers built especially for these purposes. Includes listings of the various professional consultants involved. (1976) $5.00

ONE OUT OF TEN: SCHOOL PLANNING FOR THE HANDICAPPED Implications of the new laws for the handicapped, and alternative methods of educating handicapped children in public schools. (1974) Single copies free, multiple copies 50 cents each.

PATTERNS FOR DESIGNING CHILDREN'S CENTERS A book for people planning to operate children's centers. It summarizes and illustrates all the design issues involved in a project. (1971) $2.95

PHYSICAL RECREATION FACILITIES Illustrated survey of places providing good facilities for physical recreation in schools and colleges—air shelters, roofing existing stadiums, shared facilities and conversions. (1973) $3.00

THE PLACE OF THE ARTS IN NEW TOWNS Reviews approaches and experiences for developing arts programs and facilities in new towns and established communities. Gives insights and models for the support of the arts, including the role of the arts advocate, the use of existing space, and financing. (1973) $3.00

REUSING RAILROAD STATIONS Reports the plight of abandoned stations and the rich architectural and civic heritage they represent. It advocates their reuse for combined public and commercial purposes, including arts and educational centers, transportation hubs, and focal points for downtown renewal. Extensively illustrated. (1974) $4.00

REUSING RAILROAD STATIONS BOOK TWO Furthers the advocacy position of the first book and describes some of the completed and underway conversions in more detail. A large section of the book explains some of the intricacies of financing that a nonprofit group would have to understand before successfully developing a railroad station. (1975) $4.00

STUDENT HOUSING A guide to economical ways to provide better housing for students. Illustrates techniques for improvement through administrative changes, remodeling old dorms, new management methods, co-ops and government financing. (1972) $2.00